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09/664,323	09/18/2000	Shoji Karasawa	P19993.P06	4200

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1745	13

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/664,323	Applicant(s) KARASAWA ET AL.	
	Examiner Susy N Tsang-Foster	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-35* is/are pending in the application.

4a) Of the above claim(s) *12-23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *24-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/11/2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. This Office Action is responsive to the amendment filed on 12/11/2002. Claims 1-11 have been cancelled. Claims 24-35 have been added. Claims 12-35 are pending. Claims 12-23 remain withdrawn from consideration. Art rejections in the previous Office Action relying on any one of Morioka et al. (US 3,960,603), Rouillard et al. (US 6,120,930), and Hirokou et al. (US 5,871,861) are withdrawn in view of applicants' amendment to the claims.

Applicants incorrectly state on page 14 of the amendment that the Suzuki reference of record is not a proper reference under 35 USC 102(e) since it was filed in the U.S. on June 28, 2001 that is after the priority date of September 21, 1999 of the present application. In response, the Suzuki reference was filed on June 28, 2000 and a certified translation of the priority document is needed to overcome art rejections based on Suzuki.

The terminal disclaimer filed on 12/11/2002 has been entered into the file. However, applicants incorrectly disclaimed over US Pat. No. 5,840,087 instead of over copending application 09/842,562. A new terminal disclaimer is not required since applicants amended the claims which are no longer obvious over the claims of copending application 09/842,562.

Claims 24-35 are finally rejected for reasons necessitated by the amendment.

Drawings

2. The corrected or substitute drawings were received on 12/11/2002. These drawings are approved by the Examiner.

Specification

3. The disclosure is objected to because of the following informalities:

It is recommended to the applicants to insert "This application claims foreign priority to Japanese Patent Application No. HEI 11-267001, filed September 21, 1999" at the beginning of the specification and to remove this reference at the end of the specification. Nevertheless, the filing date for the Japanese Patent Application is **currently missing** at the end of the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 26, 28, 29, and 31-33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 26, the limitation "said positive electrode plates and said negative electrode plates are made of one of nickel sheet and nickel-plated steel sheet" is not in the original disclosure. Instead, original claim 3 states that the collector plates, not the electrode plates, are made of either one of nickel sheet or nickel-plated steel sheet. For the purposes of prosecution, the limitation in claim 26 is interpreted as "said positive electrode collector plates and said negative electrode collector plates are made of one of nickel sheet and nickel-plated steel sheet" .

In claim 28, the limitation "said solder material is configured to be reflowed after being applied to said protruding edges of said plurality of positive and negative electrode plates" is not in the original disclosure.

Instead, pages 14-15 of the specification state that nickel solder is obtained by mixing powder consisting of nickel metal and binder into a paste and the paste is applied to collector plates at the desired locations and then the collector plates are heated in a vacuum furnace whereby the nickel solder paste is reflowed. Original claim 5 also states that the solder material is applied on the positive and negative collector plates (not on the protruding edges of the plurality of positive and negative electrode plates) beforehand and is reflowed afterwards.

In claims 29, and 31-33 the limitation "said plurality of bent portions bent at random angles" describing the final product is not in the original disclosure. Page 20, lines 5-16 of the specification state that as shown in Figure 15C, when a collector plate 21 or 22 is pressed against the electrode plates, because of the bent portion 33 smoothly bending and adjusting, so that the edges of the electrode plates 18, 19 together form a uniform, flat end surface, which will be in favorable contact with the collector plates 21, 22. This section of the specification contradicts

applicants' assertion on page 13 of the amendment filed on 12/11/2002 that Figure 15C shows a plurality of bent portions bent at random angles in the final product as claimed.

For the purpose of prosecution, the limitation "said plurality of bent portions bent at random angles" is interpreted as a product-by-process limitation since Figure 15C clearly shows a process of bending the bent portions that bend through various (random) angles toward the final product of a uniform flat end surface of the electrode plate group.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 34 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 34 and 35 recites the limitation "said plurality of channels" in line 2 of each claim. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 24-26 rejected under 35 U.S.C. 102(b) as being anticipated by Cailley (US 3,732,124).

In claim 24, the limitation "a positive electrode collector plate attached to said protruding edges of said plurality of positive electrode plates and having a positive electrode collector plate channel defined by raised edges protruding beyond a plate defined by said positive electrode collector plate, said raised edges of said positive electrode collector plate channel on a side of said positive electrode collector plate attached to said protruding edges of said plurality of positive electrode plates" and "a negative electrode collector plate attached to said protruding edges of said plurality of negative electrode plates and having a negative electrode collector plate channel defined by raised edges protruding beyond a plate defined by said negative electrode collector plate, said raised edges of said negative electrode collector plate channel on a side of said negative electrode collector plate attached to said protruding edges of said plurality of negative electrode plates" are not explicitly stated in the original disclosure because the terms "channel" and "raised edges" are not used in the specification.

The specification states on page 14, lines 15-18 that "Figure 12 D shows in detail one example of the corrugated portion 29 wherein a groove 29b is formed on the top of the ridge 29a of the corrugated portion 29, this groove 29b being filled with the nickel solder material 30".

Thus, the Examiner is interpreting the term "channel" to be equivalent to the term "groove" and the term "raised edges" to be supported by the cross-section of the collector plate shown in Figure 12D which shows raised edges 29a.

Cailley discloses a battery comprising an electrode plate unit that comprises a group of electrode plates that comprise a plurality of positive electrode plates and negative electrode plates that are alternately stacked upon one another with intervening separators therebetween and the edges of the plurality of positive electrode plates protrude beyond edges of the plurality of negative electrode plates on side of the group of electrode plates and edges of the plurality of negative electrode plates protrude beyond edges of the plurality of positive electrode plates on an opposite side of the group of electrode plates (col. 1, lines 15-35). A current collector plate shown in Figure 6 has 4 channels defined by raised edges 13 protruding beyond a plane defined by the collector plate (col. 4, lines 19-27). The raised edges of the current collector plate shown in Figure 6 are attached to the protruding edges of the corresponding electrode plate. The current collector plate can be made of nickel-plated steel (col. 2, lines 61-63). As seen in Figure 6, the channels on the collector plate extend at 90 degree intervals and each channel extends in a direction substantially parallel to the direction in which the positive electrode plates and the negative electrode plates are stacked.

10. Claim 29 is rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al. (US 6,432,574 B1).

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Suzuki et al. disclose a battery comprising an electrode plate unit that comprises a plurality of positive electrode plates and a plurality of negative electrode plates that are

alternately stacked upon one another with intervening separators therebetween; and an electrode collector plate attached to protruding edges of the plurality of positive electrode plates and a plurality of bent portions are respectively formed on an edge of the protruding edges of the plurality of positive electrode plates (abstract; Figures 2A, 2B, 3A, 3B, 4A-4C, 5A-5D, and 6; col. 3, lines 34-48; and col. 5, line 27 to col. 6, line 10). The plurality of bent portions are formed by forming cutting lines on the protruding edges of the plurality of positive electrode plates (col. 6, lines 9-10) and pressing the cut parts toward a direction parallel to a plane of the first end of the electrode plate unit to form the bent portions (col. 5, lines 65-67). During the bending step, the cut portions inherently bend through various angles (random angles) until they reach an angle where they are parallel to a plane of the first end of the electrode unit.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claim 29 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Oweis et al. (US 5,972, 532).

The product-by-process limitation of claim 29 is not given patentable weight since the courts have held that patentability is based on a product itself, even if the prior art product is made by a different process (In re Thorpe, 227 USPQ 964, 1985). Specifically, the limitation

"said plurality of bent portions bent at random angles" is interpreted by the Examiner as a product-by-process limitation for reasons given above.

Oweis et al. disclose a battery comprising an electrode plate unit where the electrode plate unit includes a plurality of positive electrode plates and a plurality of negative electrode plates that are alternately stacked upon one another with intervening separators therebetween; protruding edges of each of the plurality of positive electrode plates and protruding edges of negative electrode plates; a collector plate respectively attached to the protruding edges of the plurality of the positive electrode plates and to the protruding edges of the plurality of negative electrode plates, and a plurality of bent portions respectively formed on an edge of the protruding edges of the plurality of positive electrode plates and the plurality of negative electrode plates (col. 1, lines 5-23; col. 2, lines 5-34; col. 4, lines 1-25).

13. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cailley (US 3,732,124) in view of Coibion et al. (4,053,687).

The product-by-process limitations of claim 28 are not given patentable weight since the courts have held that patentability is based on a product itself, even if the prior art product is made by a different process (see In re Thorpe, 227 USPQ 964, (CAFC 1985), In re Brown, 173 USPQ 685 (CCPA 1972), and In re Marosi, 218 USPQ 289, 292-293 (CAFC 1983)).

Cailley discloses all the limitations of claims 27 and 28 (see above for independent claim 24 from which these claims depend) except that solder is used to bond the collector plates to the protruding edges of the electrode plate group.

Coibion et al. teach that welding or soldering can be used to connect a collector plate to each of the protruding edges of an electrode plate group (col. 2, lines 5-33) and that either welding or soldering provides for an effective electrical connection (col. 6, lines 44-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to solder the collector plates to the protruding edges of the electrode plate group instead of welding the collector plate to the protruding edges of the electrode plate group because soldering can be equivalently used as a technique to connect the collector plate to an electrode plate group of a battery and soldering provides for an effective electrical connection between the collector plate and the protruding edges of electrode plate group.

14. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugikawa (US 5,655,295) in view of Oweis et al. (US 5,972,532) and Cheu (US 5,674,641).

The product-by-process limitations of claims 31-33 are not given patentable weight since the courts have held that patentability is based on a product itself, even if the prior art product is made by a different process (In re Thorpe, 227 USPQ 964, 1985). Specifically, the limitation "said plurality of bent portions bent at random angles" is interpreted by the Examiner as a product-by-process limitation for reasons given above.

Sugikawa discloses a battery comprising an electrode plate unit where the electrode plate unit includes a plurality of positive electrode plates and a plurality of negative electrode plates that are alternately stacked upon one another with intervening separators therebetween and lead portions of each of the plurality of positive electrode plates and lead portions of negative

electrode plates extending along a respective edge of the electrode plate unit; a collector plate respectively attached to the lead portions of the plurality of the positive electrode plates and to the lead portions of the plurality of negative electrode plates; and the lead portions of the plurality of positive electrode plates and the plurality of negative electrode plates comprise a reinforcing material in the form of solid metal 15 (col. 1, lines 54-67; col. 6, lines 49-67; col. 7, lines 1-33; Figures 1A, 1B, 2, and 13)

Sugikawa does not disclose either a plurality of bent portions respectively formed on an edge of the plurality of positive electrode plates and the plurality of negative electrode plates or that the lead portions of the positive and negative electrode plates include a locator in the form of a hole for positioning the edges of the positive or negative electrode plates with respect to the collector plate.

Oweis et al. teach a plurality of bent portions respectively formed on an edge of the plurality of positive electrode plates and the plurality of negative electrode plates that are offset from each other in a spiral wound assembly wherein the bent portions increase the contact area between the collector (contact tab) and the electrode as compared to contacting the collector with only the edge portion of the electrode (col. 1, lines 5-23 , col. 2, lines 1-34; col. 4, lines 42-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide bent portions on an edge of the plurality of positive electrode plates and on an edge of the plurality of negative electrode plates of the electrode plate unit of the battery of Sugikawa because the bent portions increase the contact area between a collector and the respective electrode as compared to contacting the collector with only the edge portion of the electrode.

Cheu teaches providing holes in the lead portions of the positive and negative electrode plates for aligning the lead portions (tabs) of the respective positive and negative electrode plates prior to fastening a collector plate to each electrode polarity (See Figures 1 and 5, and col. 7, lines 32-67).

It would have been obvious to one ordinary skill in the art at the time the invention was made to provide holes in the lead portions of the positive and negative electrode plates because the holes in the lead portions allows the lead portions to be aligned prior to them being connected to a collector plate.

15. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oweis et al. (US 5,972,532) in view of Cheu (US 5,674,641).

The product-by-process limitation of claims 31 and 32 is not given patentable weight since the courts have held that patentability is based on a product itself, even if the prior art product is made by a different process (In re Thorpe, 227 USPQ 964, 1985). Specifically, the limitation "said plurality of bent portions bent at random angles" is interpreted by the Examiner as a product-by-process limitation for reasons given above.

Oweis et al. disclose a battery comprising an electrode plate unit where the electrode plate unit includes a plurality of positive electrode plates and a plurality of negative electrode plates that are alternately stacked upon one another with intervening separators therebetween and lead portions of each of the plurality of positive electrode plates and lead portions of negative electrode plates extending along a respective edge of the electrode plate unit; a collector plate respectively attached to the lead portions of the plurality of the positive electrode plates and to

the lead portions of the plurality of negative electrode plates, and a plurality of bent portions respectively formed on an edge of the plurality of positive electrode plates and the plurality of negative electrode plates (col. 1, lines 5-23; col. 2, lines 5-34; col. 4, lines 1-25).

Oweis et al. do not disclose that the lead portions of the positive and negative electrode plates include a locator in the form of a hole for positioning the edges of the positive or negative electrode plates with respect to the collector plate.

Cheu teaches providing holes in the lead portions of the positive and negative electrode plates for aligning the lead portions (tabs) of the respective positive and negative electrode plates prior to fastening a collector plate to each electrode polarity (See Figures 1 and 5, and col. 7, lines 32-67).

It would have been obvious to one ordinary skill in the art at the time the invention was made to provide holes in the lead portions of the positive and negative electrode plates because the holes in the lead portions allows the lead portions to be aligned prior to them being connected to a collector plate.

16. Claims 24, 25, 30, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oweis et al. (US 5,972,532) in view of JP 60-7058 A (JPO English abstract).

In claims 24 and 30, the limitations "a positive electrode collector plate attached to said protruding edges of said plurality of positive electrode plates and having a positive electrode collector plate channel defined by raised edges protruding beyond a plate defined by said positive electrode collector plate, said raised edges of said positive electrode collector plate channel on a side of said positive electrode collector plate attached to said protruding edges of said plurality of positive electrode plates" and "a negative electrode collector plate attached to

said protruding edges of said plurality of negative electrode plates and having a negative electrode collector plate channel defined by raised edges protruding beyond a plate defined by said negative electrode collector plate, said raised edges of said negative electrode collector plate channel on a side of said negative electrode collector plate attached to said protruding edges of said plurality of negative electrode plates" are not explicitly stated in the original disclosure because the terms "channel" and "raised edges" are not used in the specification.

The specification states on page 14, lines 15-18 that "Figure 12 D shows in detail one example of the corrugated portion 29 wherein a groove 29b is formed on the top of the ridge 29a of the corrugated portion 29, this groove 29b being filled with the nickel solder material 30".

Thus, the Examiner is interpreting the term "channel" to be equivalent to the term "groove" and the term "raised edges" to be supported by the cross-section of the collector plate shown in Figure 12D which shows raised edges 29a.

Oweis et al. disclose a battery comprising an electrode plate unit where the electrode plate unit includes a plurality of positive electrode plates and a plurality of negative electrode plates that are alternately stacked upon one another with intervening separators therebetween to form a group of electrode plates; and edges of the plurality of positive electrode plates protrude beyond edges of the plurality of negative electrode plates on one side of the group of electrode plates where each edge of the edges of the plurality of positive electrode plates has a slit; and edges of the plurality of negative electrode plates protrude beyond edges of the plurality of positive electrode plates on an opposite side of the group of electrode plates, and each of the edge of the edges of the plurality of negative electrode plates has a slit; a collector plate

respectively attached by laser welding to the protruding edges of the plurality of positive electrode plates and a negative electrode collector plate attached to the protruding edges of the plurality of negative electrode plates (col. 1, lines 5-23; col. 2, lines 5-34; col. 4, lines 1-25; col. 5, lines 65-67).

Oweis et al. do not disclose that both the positive electrode collector plate and negative electrode collector plate each has a collector plate channel defined by raised edges protruding beyond a plane defined by the respective collector plate and the raised edges of the respective collector plate channel on a side of the respective collector plate are attached to the corresponding protruding edges of the plurality of electrode plates.

Figure 1 of the JP 60-7058 A shows a collector plate having 4 channels extending at 90 degree intervals and in a direction substantially parallel to the direction in which the positive and negative electrode plates are stacked. The channels are formed by raised edges protruding beyond a plane defined by the collector plate where each channel has a raised edge at the center of the plate and a raised edge at the periphery of the plate (see Figure 1) and the raised edges are attached to the protruding edges of a plurality of electrode plates and planar portion 3 extending between adjacent channels. The JPO English abstract of the reference teaches that using a collector plate having these channels enables the collector plate to be electrically connected to the electrode at a plurality of points during the laser welding process when a laser beam is irradiated along the center line of the channel and thermal imbalance between the collector plate and electrode is greatly compensated as a result of the multipoint electrical contact during welding which in turn improves the welding intensity.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the current collector of JP 60-7058 A shown in Figure 1 in the battery of Oweis et al. because a current collector having this configuration enables the collector plate to be electrically connected to the protruding edge of the electrode at a plurality of points during the laser welding process with greatly compensated thermal imbalance between the collector plate and electrode edge and improved welding intensity.

Response to Arguments

17. Applicant's arguments with respect to claims 24-35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications should be directed to examiner Susy Tsang-Foster, Ph.D. whose telephone number is (703) 305-0588. The examiner can normally be reached on Monday through Thursday from 9:30 AM to 8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at (703) 308-2383. The phone number for the organization where this application or proceeding is assigned is (703) 305-5900.

The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9310 for regular communications and (703) 872-9311 for After-Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

st/20 February 2003

Susy Tsang-Foster